

## **REMARKS**

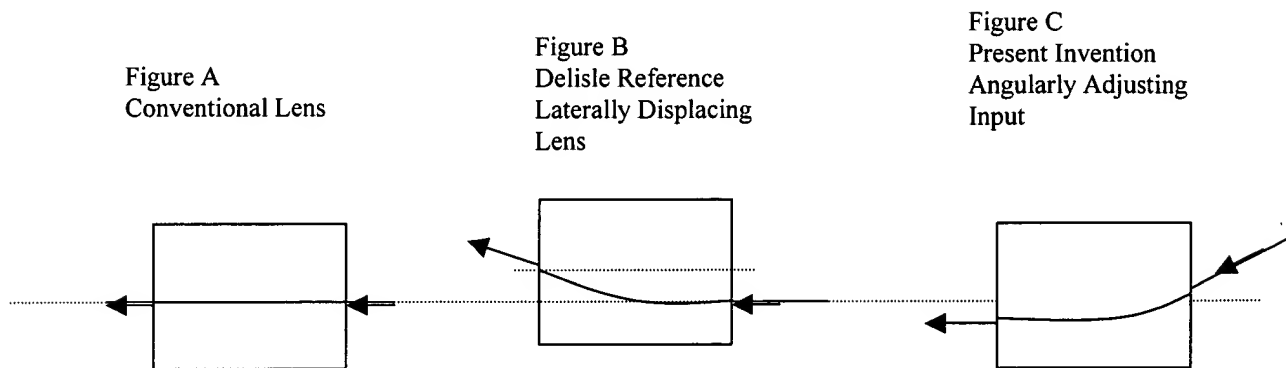
Claims 1 to 22 are currently pending. Claims 1 to 6, 11 to 13, 15, and 19 to 21 have been rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,904,824 (Delisle) in view of United States Patent No. 6,253,011 (Haake). Claims 7 to 10, 14, 16 to 18 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Accordingly, claim 7 has been amended to include the features of claim 1; claim 14 has been amended to include the elements of claims 1, 11 and 12; claim 15 has been amended to include the aspects of claim 16; and the limitations of claims 15 and 19 have been amalgamated into claim 22.

Furthermore claim 1 has been amended to overcome the objections of the Examiner and to better define the invention in light of the prior art. In particular, the claim now clearly defines a “collimating means”, a “focusing means”, and a “tilting means”, which work together to convert an angular displacement caused by a temperature change into a lateral displacement of a focused beam into the planar waveguide.

None of the cited references alone or in combination disclose or even infer the particular advantage provided by the present invention, i.e. converting a change in the input angle of a collimated light beam entering a lens into a lateral displacement of the focused output beam exiting the lens. For a conventional GRIN lens (Figure A), a beam of light entering one end along the optical axis will exit the other end still along the optical axis. The Delisle reference (Figure B) discloses laterally displacing the lens between the input waveguide and the planar waveguide, which causes both a lateral displacement and an angular offset of the focused beam at the output of the lens. The angular offset can be particularly undesirable, thereby limiting the useful range of the

device. The present invention minimizes the angular offset by simply changing the angle at which the collimated beam enters the focusing lens.



The Haake device discloses a very complicated assembly including a bimorphic actuator for laterally displacing a carrier, which holds a fiber. The Haake reference fails to disclose a device for tilting the beam of light, thereby changing the input angle of the collimated beam of light on a focusing lens.

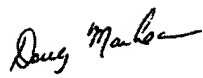
As such, it is respectfully submitted that all of the claims remaining in the application are in condition for allowance. Early and favorable consideration would be appreciated.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

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Respectfully,



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